

# Health of the Elderlies and Healthy Ageing: A Challenge for Europe

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**Abstract.** Population ageing is a major challenge for European Union (EU) society and economy, particularly for Italy, which is the oldest country in Europe. According to the World Health Organization, two-thirds of European citizens who have reached the retirement age suffer from at least two chronic conditions, with a strong pressure on healthcare systems. Moreover, EU countries already spend, on average, more than a quarter of their gross domestic product on social protection, above all pensions, health and long term care. The current financial crisis is putting a strain on this system. In this context, it becomes increasingly necessary to promote a healthy and independent ageing, by improving outcomes for patients and society while ensuring health systems sustainability. To this purpose a proactive approach to chronic diseases prevention (primary, secondary and tertiary) as well as an integrated healthcare approach and also patients' empowerment are required so as to make daily life more age-friendly. It is also necessary to share health and social best practices, adopt policies really effective against elderly social exclusion and strengthen older people participation in society. A joint effort of all key stakeholders is needed to create a society in which older people can play an active role.

**Keywords.** Active Ageing, Healthy Living, Health 2020, Chronic Diseases, Prevention, Università Cattolica del Sacro Cuore

## 1. Worldwide strategies and organization's point of view

### 1.1. The World Health Organization

According to the World Health Organization (WHO) [1], beside a privilege and a goal, getting old is also a challenge of the modern age, having an impact on all aspects of the 21<sup>st</sup> century society. The health of the elderly and healthy ageing are then, or rather should be, a priority for our health care system, characterized by the presence of several instruments in the field of preventive, diagnostic, therapeutic and rehabilitative care, to avoid or "relieve" the onset and/or worsening the course of many of the major chronic degenerative diseases.

In 2012 the WHO Regional Office for Europe approved an evidence-based health policy framework by releasing different papers. Among these, the document *Strategy and action plan for healthy ageing in Europe, 2012–2020* [2], published in 2012, is focused on healthy ageing. The most recent document *Health 2020. A European policy framework and strategy for the 21st century* [3], published in 2013, concerns healthy ageing in some parts.

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*Strategy and Action Plan for Healthy Ageing in Europe, 2012–2020*

The document *Strategy and action plan for healthy ageing in Europe 2012–2020* identifies 4 strategic areas, declining actions by WHO and Member States, and 5 priority interventions [2].

The objective of the strategic area n. 1, named “Healthy ageing over the life-course”, is the delivering of health promotion and disease prevention services for healthy ageing by some actions, among which paying particular attention to the needs and special risks of persons aged  $\geq 50$  years, ensuring that gender aspects are well addressed, developing instruments for evaluation and monitoring of the implementation of policies for healthy ageing, supporting reporting systems and research to monitor the successful implementation of the actions.

The strategic area n. 2, “Supportive environments” aims to engage communities in developing strategies for becoming more age-friendly, by supporting environments for older people and allowing them to play an active role in building their social environment and defining local policies for healthy ageing.

The objectives of the strategic area n. 3, “People centred health and long-term care systems fit for ageing populations” are the strengthening of the response of health systems to ageing through high-quality services and financial and social protection by different suggested actions. Among these, contributing to research, documentation and spreading of good practices related to innovative models of healthcare delivery and access to information (including e-Health) and improving reporting systems can be described. Moreover, health literacy and the empowerment of the elderly and their caregivers are emphasized, as well as supporting home care and disease management programmes, promoting policies for financial protection to guarantee universal access to health and social care (e.g. cost-sharing regulations), strengthening cost-effective and evidence-based primary care interventions and promoting a proactive approach to chronic diseases prevention (primary, secondary and tertiary) beside an integrated healthcare approach.

The strategic area n. 4, “Strengthening the evidence base and research” aims to strengthen the capacity to assess and monitor elderly health and functional status and access to social and health care services.

Some suggested actions by WHO are dealing with the aim to carry the qualitative and the quantitative research that is needed to guide policy, to identify the gaps in evidence for policy and priority research for ageing and health and to promote existing tools in order to provide guidance on the production of health and ageing indicators for non-European Union countries. Actions by Member States mostly refer to monitor health and social care services and their utilization and access by older people, by improving the capacity of surveys and reporting systems, along with the creation of a centre of excellence for research and implementation of healthy ageing policies and strategies, to monitor the demographic, social and health situation.

Priority interventions are focused on 5 main areas, following their corresponding priority area for action under the Health 2020 framework (see below) [3].

Priority intervention n. 1, i.e. “Promoting physical activity”, has the goal to promote elderly physical activity through social and community strategies.

Priority intervention n. 2, “Falls prevention”, aims to reduce accidental falls, and their burden of disease, among older persons. Making the general population more aware of risk factors and effective falls prevention measures, along with implementing exercise programmes, physical therapy and home safety assessment, or including falls prevention measures in quality frameworks in all health and social care settings are some of the suggested actions.

“Vaccination of older people and infectious disease prevention in health care settings” is the priority intervention n. 3. Its goal is to reduce the gaps in vaccination against common infectious diseases that bring older people to have health risks (morbidity and mortality).

Priority intervention n. 4 identifies “Public support to informal caregiving with a focus on home care, including self-care”. It means making informal care sustainable and improving health and well-being of those in need of care and their caregivers, for example by training older adults and informal caregivers in self-care, disseminating good practice, strengthening the evidence base for the improvement of international systems for reporting on the family situation and informal caregiving or making evaluation and trend analysis.

The last priority intervention, “Geriatric and gerontological capacity building among the health and social care workforce”, tries to align training capacity in geriatrics and gerontology to the degree of health and social care needs of older people (e.g. people suffering from dementia) [2].

### *Health 2020. A European Policy Framework and Strategy for the 21st Century*

In the first part of the paper, *Health 2020: a European policy framework supporting action across government and society for health and well-being* [3], four priority areas are identified. In the priority area n. 1, “Investing in health through a life-course approach and empowering people”, healthy and active ageing is defined as a “policy priority and a major research priority”, and the need to promote health programmes supporting healthy ageing is underlined.

In the second part, “Health 2020: policy framework and strategy”, in the section referred to the evidence-based strategies to be applied and the key stakeholders, several solutions working for healthy older people are listed. Among them there are legislation and social and economic policies for social protection, e.g. income support, neighborhood and urban planning and supportive transport - such as adapting building design and transport systems to the needs of older or disable people - public health promotion, health and social services and support for informal care and social networks. The aim of these actions is to reduce health inequities and promote the empowerment of older people through health literacy and disease self-management.

#### *1.2. The European Commission*

The future of the European Union (EU) is widely believed to be connected to its power of innovation. In 2010, through the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions entitled “Europe 2020 Flagship Initiative. Innovation Union” [4], the strategy to create a new innovation-friendly setting in order to make it

easier the creation of products and services from great ideas and to bring our economy growth, also producing jobs, was presented as the solution. Innovation Union is now a part of the Europe 2020 strategy aiming to create competitiveness, societal challenges through research and innovation sustainable and inclusive growth. The Innovation Union contains more than 30 action points including the support by the Council, Parliament, Member States, industry and other stakeholders to innovation partnership initiatives (called European Innovation Partnerships), aimed at addressing weaknesses in the innovation system and European research (e.g. fragmentation and duplication or under-investment) [5].

The European Commission (EC), by identifying healthy and active ageing as one of the major challenges common to all European countries, and a potential area for Europe to provide innovative responses, gave life to the European Innovation Partnership on Active and Healthy Ageing. The partnership has the purpose to make EU citizens able to remain healthy, active and independent while ageing, to improve the efficiency and sustainability of health and social care system, to improve the competitiveness for innovative services and products facing the ageing challenge and finally to increase the average healthy lifespan by 2 years by 2020. The Partnership action plans and activities up to the present can be found at <http://ec.europa.eu/research/index.cfm>, by consulting the theme "Innovation" [6].

Since 1973, the EC established the *Eurobarometer*, a tool that measures and analyzes trends in public opinion in all Member States and candidate countries ([www.ec.europa.eu/public\\_opinion](http://www.ec.europa.eu/public_opinion)). Knowing public opinion is important for the EC to prepare its legislative proposals, take decisions and evaluate its work. The surveys and studies are aimed at addressing issues of primary importance for European citizens, such as enlargement of the EU, Euro, defense, social situation, health, culture, information technology, environment.

On January 2012, the report on the survey "Active ageing" has been published as Special *Eurobarometer* n. 378 [7]. It states on its conclusion that, even if most Europeans are aware of demographic ageing, they are not concerned by it, unlike policy makers and experts. The survey reveals, among other things, some information about working, highlighting that more than 40% of Europeans are convinced that they could continue working up to the age of 65 and beyond, also believing that people should be allowed to continue working past the retirement age, if they want to, possibly combining part-time working and a partial pension.

From the survey, also it comes to light that older Europeans contribute to society through voluntary work in a wide variety of organisations. Many Europeans also believe that governments can do more to support carers (financial help or working flexible hours). Focusing on healthy ageing, most Europeans judge their country and local areas as 'age friendly', even if they point out the need of improvement in facilities for older people to stay fit and healthy, or in public transport and road safety. A major obstacle for older people seems to be the use of information technologies by public services and businesses to interact with the public.

The local level is perceived as the level of governance playing the strongest role in the challenges of ageing.

### 1.3. The Organisation for Economic Co-operation and Development

The Organisation for Economic Co-operation and Development (OECD) (<http://www.oecd.org/>) published in 2011 a document named *Ageing, health and innovation: policy reforms to facilitate healthy and active ageing in OECD countries* [8]. Referring to the policy reforms in ageing health and innovation in OECD countries, and in particular to Healthcare reform, it is underlined how Healthcare reform is driven in the majority of countries by a desire to control costs, constantly increasing because of several factors (e.g. advances in medical science - drugs, technology and procedures, population demands and demographic changes). The document shows how the main focus has been on cost-containment by cutting or limiting budgets, although attention has been also paid in some countries to increasing patient choice, improving quality through evidence based medicine and guidelines and implementing health technology.

The paper describes some examples of policies with the potential to support and facilitate healthy ageing, also by helping older people to continue to be active and productive. Policies are both related to health and social care, e.g. more prevention of chronic diseases, better treatment, e-health improvement, and other issues, such as flexible working, gradual retirement, adapting homes to older people needs. Moreover, new approaches and solutions to fund care and new ways of health and social care organization and supplying are described, targeted to guarantee solidarity between generations and economic sustainability. Policy reforms and interventions centred on active ageing would allow the elderly to remain independent and healthy and also allow to contribute to the financial sustainability of the whole system.

## 2. The National Observatory on Health Status in the Italian Regions and healthy ageing

The National Observatory on Health Status in the Italian Regions ([www.osservasalute.it](http://www.osservasalute.it)) represents a cooperation among the Section of Hygiene of the Department of Public Health of the Università Cattolica del Sacro Cuore and other Italian universities and several national, regional and corporate public institutions. This cooperative activity is multidisciplinary and involves around 230 public health care experts, clinicians, demographers, epidemiologists, mathematicians, statisticians and economists that, with different competencies, have as own scientific interests the individuals and collective health condition and the promotion of its improvement.

In 2012, the National Observatory on Health Status in the Italian Regions published 2 relevant documents concerning healthy ageing: the White paper *Health of the elderlies and healthy aging* [9] and the Decalogue *Ten rules toward Healthy Aging* [10].

### 2.1. Health of the Elderlies and Healthy Ageing

The White paper *Health of the elderlies and healthy aging* [9] was aimed to analyze the main issues related to the health care of the elderly, in order to outline the unmet needs, to highlight the regional differences and identify possible gaps between the delivered and optimal health care offer. The first part of the paper describes the elderly population, with indicators related to socio-demographic conditions, survival and

mortality rates, disability status and participation in social life. The second part, focused on health care risks, shows indicators related to social networks, main risk factors and lifestyles, prevention, neurodegenerative diseases and primary and secondary care.

The "snapshot" of the Italian situation, highlights both the progress achieved in the context of health status and health care quality of the elderly in our country, both intervention areas needed to be implemented in order to achieve satisfactory levels.

In fact, the analyzed data show a good overall picture of the health status of the elderly, pointing out heterogeneities among regions, as well as both gender and age classes, mainly related to lifestyles, behaviors and access to services.

In order to reduce these heterogeneities, a better coordination of national, regional and local policies would be required, together with the development of prevention and health education activities and services and the alignment of the supply to the demand, also by citizens involvement, to achieve a proper resources prioritization and allocation, especially in times of financial crisis and downsizing of public spending.

## 2.2. Ten rules toward Healthy Ageing

The Decalogue *Ten rules toward Healthy Aging* [10], list 10 recommendations, suggested by a team of experts, aimed at the adult population and the elderly, just to make elderly age synonymous of health, according to the 2012 EU commitment on active and healthy ageing.

### I. Social Inclusion and Participation.

The greater involvement in social inclusion and participation is a protective factor for physical and mental health.

For the whole population and, in particular, for the elderly, participating in "social networks", based on family, friends and carers, protects against loneliness, isolation, by increasing opportunities for knowledge and support and improving the perceived quality of life, both in terms of physical and mental health.

### II. Diet and Nutrition.

The WHO recommends eating a minimum of 400g of fruit and vegetables per day to reduce the risk of serious health problems such as heart disease, stroke, type 2 diabetes and obesity.

To get the maximum benefit, the "5 per day" rule (i.e. assuming 5 portions per day of fruit and vegetables) should be followed. The Italian Observatory on Health Status of the Italian Regions Report 2013 [11], shows that the percentage of people that takes at least 5 daily servings of vegetables and fruit has been decreasing in 2011-2012 period (4.9% and 4.7%, respectively). The 5 portions should include a good variety of such aliments, in order to take different combinations of fiber, vitamins, minerals and other nutrients.

### III. Maintaining a healthy weight

Overweight and obesity facilitate the onset of chronic diseases such as cardiovascular diseases and diabetes, worsening both qualitatively and quantitatively the life expectancy. The body mass index (BMI) gives an estimate of the risk of overweight and obesity. Although genetic

predisposition is important in determining BMI, good habits also play a key role in maintaining a healthy weight.

IV. Physical Activity

According to scientific evidence, a regular physical activity of moderate intensity contributes to a healthy lifestyle. The exercise, preferably aerobic, does not need to be intense. In fact, 30 minutes of movement per day (walking, swimming, biking, etc.), for at least 5 times per week, are enough to enjoy many benefits (e.g. decreased risk of cardiovascular and metabolic diseases, increased self-esteem, stress management and reduction of symptoms of depression and anxiety).

V. Drinking less alcohol

Drinking alcohol is known to increase the risk of some cancers, including mouth, pharynx and larynx, esophagus, colon-rectum, liver and breast cancer. Abusing alcohol is not only resulting in chronic diseases and cancers. It is also associated with different adverse events, such as violence, road accidents and other, which may threat one's and other people's life.

VI. Stopping smoking

Smoking is associated, in some cases, to a 10 to 20 fold higher risk of contracting more than 40 different diseases such as cancer, respiratory failure (chronic obstructive pulmonary disease), vascular disease, gastrointestinal disease and osteoporosis.

VII. Protecting your skin from sun damage

Ultraviolet radiation (UV) can damage eyes and skin, leading to the onset of cataracts and skin cancers, such as melanoma. Risk/benefit ratio of sunlight, requires good timing and methods of exposure and appropriate protection, taking into account the age and the skin photo-type.

VIII. Using clinical preventive services

A proactive approach to chronic diseases prevention (primary, secondary and tertiary) leads to both an increase in life expectancy and in the number of life years free of disease. Moreover, many cost/effectiveness studies highlight how evidence-based prevention saves money and ensures, at the same time, a high-level health care assistance, avoiding unnecessary tests and procedures.

IX. Preventing elderly domestic injury

Domestic accidents kill twice than road accidents and 10 times more than workplace accidents. One-third of domestic accidents concerns the elderly (living alone or in health and social care institutions), who often are victims of falls.

X. Proper use of drugs

Elderly patients usually take several drugs, due to chronic comorbidities requiring continuous treatments. The increase of the number of ingested drugs also increases the risk of drug adverse effects [10].

### 3. The Research Activity and the Position of the Università Cattolica del Sacro Cuore

The Università Cattolica del Sacro Cuore has invested a substantial amount of its economic resources in the research field of ageing through projects involving 5 different research areas and researchers from 4 campuses.

The funded projects currently in progress on this topic are:

- *Diet and Animal Models of Aging*, coordinated by Paolo Ajmone Marsan, Faculty of Agriculture, Università Cattolica del Sacro Cuore, Piacenza;
- *Growing as older: activating resources for sustainable lifestyles*, coordinated by Alessandro Antonietti, Faculty of Psychology, Università Cattolica del Sacro Cuore, Milan;
- *"I do not retire": the lengthening of life, a challenge for generations, an opportunity for the society*, coordinated by Fausto Colombo, Faculty of Social and Political Sciences, Università Cattolica del Sacro Cuore, Milan;
- *Impact of nutritional status on longevity and ageing-related diseases*, coordinated by Claudio Grassi, Faculty of Medicine, Università Cattolica del Sacro Cuore, Rome;
- *Mathematical modeling of the impact of nutritional and environmental factors on physiological parameters during ageing*, coordinated by Alessandro Musesti, Faculty of Mathematics, Physics and Natural Sciences, Università Cattolica del Sacro Cuore, Brescia.

The Università Cattolica has developed tools, procedures and methodologies on the issue of active ageing, to recognize and increase the potential of the elderly by using the know-how of medical doctors, psychologists, nutritionists, economists, sociologists. Other opportunities, which are offered by the lengthening of lifespan, are being investigated, related to the management of time off from work after retirement for the maintenance of good living conditions.

The current research on active ageing has a leading position in the European research and it is perfectly in line with the trends of Horizon 2020 regarding the establishment of trans-national consortia for knowledge and innovation (Knowledge and Innovation Communities - KIC) at European level.

In 2014, the year of the start-up of Horizon 2020, a call has been opened for the creation of a new KIC with the aim of stimulating innovation for healthy living and active ageing. In this context, the Università Cattolica is collaborating with leading academies and industries at national and European level. In particular, the 2 key words of the proposal of the Università Cattolica will be: "patient engagement", that is the active involvement of the patient in the care process, and "good technology", i.e. the use of technology to improve patient's experience [12].

### 4. Conclusions

Population ageing is a major challenge for the EU society and economy, particularly for Italy, which is the oldest country in Europe. The EU Member States spend, on average, more than a quarter of their gross domestic product on social protection (mainly on pensions, health and long-term care). The current economic crisis is



resulting in huge financial difficulties while the large cohorts of “baby boomers” are entering their third age and begin to retire from the labor market.

In our country, the process of population ageing is quite advanced, as the proportion of young people in the total population is extremely low, while the weight of the elderly population is increasingly consistent. In fact, at the national level, there is a person aged 65 years and over every 5 residents and a little more than a 75 years and over person every 10 residents. This implies the need to adopt, in the short term, strategies and measures to deal with the consequences of the increase in the elderly population, including the increased frequency of chronic diseases typically associated with ageing. In general, these diseases impose a heavy weight to the affected population, both in terms of health and economics, due to the increased lifetime, decreased quality of life and to the treatment costs.

The key question is therefore how the current health and social systems can be sustainable not only for the survival of our welfare system, but for our own social life. The hope is that university research, as evidenced by the experience of the Università Cattolica del Sacro Cuore, through the constant and daily commitment of researchers, can help to overcome this challenge in the next future.

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